## (19) World Intellectual Property Organization

International Bureau



**PCT** 

THE COURT DE COURT

lication Date (10) International Publication Number

(43) International Publication Date 22 January 2004 (22.01.2004)

(51) International Patent Classification7: 33/40, H01J 9/24

B29C 33/42,

(21) International Application Number:

PCT/US2003/018232

(22) International Filing Date: 10 June 2003 (10.06.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2002-201539

10 July 2002 (10.07.2002) JF

(71) Applicant (for all designated States except US): 3M IN-NOVATIVE PROPERTIES COMPANY [US/US]; 3M Center, Post Office Box 33427, Saint Paul, MN 55133-3427 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): YOKOYAMA, Chikafumi [JP/JP]; 6-25-30, Minami-Kurihara, Zama, Kanagawa 225-0015 (JP). YODA, Akira [JP/JP]; 9-19, Ogawa 3-chome, Machida, Tokyo 194-0003 (JP). KIKUCHI, Hiroshi [JP/JP]; 7-3-1, Tsukimino, Yamato, Kanagawa 242-0002 (JP). (74) Agents: PECHMAN, Robert J., et al.; Office of Intellectual Property Counsel, Post Office Box 33427, Saint Paul, MN 55133-3427 (US).

WO 2004/007166 A1

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

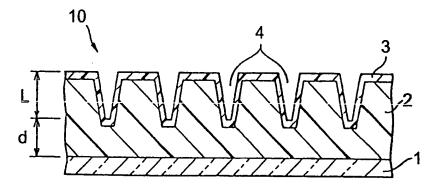
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FLEXIBLE MOLD AND METHOD OF MANUFACTURING MICROSTRUCTURE USING THE SAME



(57) Abstract: To provide a flexible mold (10) useful for manufacturing a PDP rib having a lattice pattern and other microstructures, and capable of highly precisely manufacturing the microstructures without involving defects such as occurrence of bubbles and pattern deformation. A flexible mold (10) comprises a base layer (2) made of a first curable material having a viscosity of 3,000 to 100,000 cps at 10 to 80°C and a coating layer (3) coating a surface of the base layer (2) and made of a second curable material having a viscosity of 200 cps or below at 10 to 80°C.